

In the Claims:

Please amend claims 41, 61, 85, 88, 90, 94, and 96. The claims are as follows:

1. (Previously presented) An encapsulant composition comprising:

a resin material selected from the group consisting of epoxy and cyanate ester resins; from about 1.0% by weight to about 5% by weight of the composition of a flexibilizing agent comprising a flexibilizer containing functional groups capable of reaction with the epoxy or cyanate ester resin during thermally induced curing, and a thermoplastic other than the flexibilizer, wherein the thermoplastic is separated from the cured epoxy or cyanate ester resin; and

a filler material comprising substantially spherical or spheroidal particles, each particle having a diameter of less than about 41 microns,

wherein the composition has a higher fracture toughness, a lower viscosity, and increased thermal shock resistance at a temperature excursion below -40 °C, or combinations thereof than the composition would have if the flexibilizing agent were not present in the composition.

2-13. (Canceled)

14. (Previously presented) The composition of claim 1, wherein a portion of each of said spherical or spheroidal particles includes a layer of coupling agent positioned thereon, and wherein the coupling agent comprises about 0.25% by weight of the filler material.

15-17. (Canceled)

18. (Previously presented) An electronic package comprising:

a substrate having an upper surface;

a semiconductor chip mounted on a portion of said upper surface of said substrate and electrically coupled to said substrate, said semiconductor chip having a bottom surface and at least one edge surface being substantially perpendicular to said bottom surface; and

a material positioned on at least said portion of said upper surface of said substrate and against at least a portion of said at least one edge surface of said semiconductor chip, said material being the encapsulant composition of claim 1.

19-40. (Canceled)

41. (Currently amended) A method of making an encapsulant composition, the method comprising the steps of:

providing a first quantity of resin material selected from the group consisting of epoxy and cyanate ester resins;

adding to said first quantity of resin material a second quantity of flexibilizing agent by homogenizing said flexibilizing agent in said first quantity of resin material by reacting said resin material and said flexibilizing agent together at a temperature of greater than about 100 degrees Celsius, from about 1.0% by weight to about 5% by weight of the composition of said flexibilizing agent comprising a flexibilizer containing functional groups capable of reaction with

the epoxy or cyanate ester resin during thermally induced curing, and a thermoplastic other than the flexibilizer, wherein the thermoplastic is separated from the cured epoxy or cyanate ester resin;

adding to said first quantity of resin material a third quantity of filler material comprising substantially spherical or spheroidal particles, each particle having a diameter of less than about 41 microns; and

blending said resin material, wherein after said blending said flexibilizing agent comprises [[2]] 1 percent to about 5 percent by weight of said composition,

wherein immediately after the steps of adding the flexibilizing agent and adding the filler material have been performed the composition is uncured and the composition is stable for a time period at least 12 hours,

wherein the composition has a higher fracture toughness, a lower viscosity, and increased thermal shock resistance at a temperature excursion below -40 °C, or combinations thereof than the composition would have if the flexibilizing agent were not present in the composition.

42. (Canceled)

43. (Previously presented) The method of claim 41, wherein said step of blending is performed under vacuum.

44. (Previously presented) The method of claim 43, wherein said step of blending is performed under vacuum at a pressure of about 5 millimeters of mercury.

45. (Canceled)

46. (Previously presented) The method of claim 41, wherein a portion of each of said spherical or spheroidal particles includes a layer of coupling agent positioned thereon, and wherein the coupling agent comprises about 0.25% by weight of the filler material.

47-57. (Canceled)

58. (Previously presented) The composition of claim 1, wherein the resin material consists of epoxy resins, wherein the composition further comprises a surfactant comprising that facilitates mixing the filler with the epoxy resins, wherein the surfactant comprises non-ionic type surface active agents, and wherein the surfactant comprises between about 0.5% and about 3% by weight of the composition.

59. (Previously presented) The composition of claim 1, wherein the filler material has a negative coefficient of thermal expansion.

60. (Previously presented) The composition of claim 1, wherein the composition further comprises an organic dye comprising less than about 0.2% by weight of the composition.

61. (Currently amended) The composition of claim 1, wherein the composition further comprises non-reactive organic solvents comprising less than about 0.2% by weight of the composition or

the composition is completely free of non-reactive organic solvents.

62. (Previously presented) The composition of claim 1, wherein the composition is cured and has a coefficient of thermal expansion between about 25 and about 40 ppm/ $^{\circ}$ C, a glass transition temperature between about 140 $^{\circ}$ and about 190 $^{\circ}$ C, and a Shore D hardness greater than about 90.

63-81. (Canceled)

82. (Previously presented) The method of claim 41, wherein the resin material consists of epoxy resins, wherein the composition further comprises a surfactant comprising that facilitates mixing the filler with the epoxy resins, wherein the surfactant comprises non-ionic type surface active agents, and wherein the surfactant comprises between about 0.5% and about 3% by weight of the composition.

83. (Previously presented) The method of claim 41, wherein the filler material has a negative coefficient of thermal expansion.

84. (Previously presented) The method of claim 41, wherein the composition further comprises an organic dye comprising less than about 0.2% by weight of the composition.

85. (Currently amended) The method of claim 41, wherein the composition further comprises non-reactive organic solvents comprising less than about 0.2% by weight of the composition or

the composition is completely free of non-reactive organic solvents.

86. (Previously presented) The method of claim 41, wherein after the substantially curing step, the composition has a coefficient of thermal expansion between about 25 and about 40 ppm/^o C, a glass transition temperature between about 140^o and about 190^o C, and a Shore D hardness greater than about 90.

87. (Previously presented) The composition of claim 1, wherein the resin material consists of epoxy resins, and wherein the epoxy resins comprise 3',4'-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate.

88. (Currently amended) The composition of claim 54 1, wherein the thermoplastic comprises a poly(arylene) ether, and wherein the first flexibilizer comprises bis(2,3-epoxy-2-methylpropyl)ether.

89. (Previously presented) The composition of claim 1, wherein the filler material comprises zirconium tungstate.

90. (Currently amended) The composition of claim 14, wherein the coupling agent comprises comprises b-(3,4-epoxycyclohexyl) ethyltrimethoxy silane.

91. (Previously presented) The composition of claim 58, wherein the surfactant comprises

polyethylene glycol-p-tert-octylphenyl ether .

92. (Previously presented) The composition of claim 60, wherein the organic dye comprises nigrosine.

93. (Previously presented) The method of claim 41, wherein the resin material consists of epoxy resins, and wherein the epoxy resins comprise 3',4'-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate.

94. (Currently amended) The method of claim 78 41, wherein the thermoplastic comprises a poly(arylene) ether, and wherein the first flexibilizer comprises bis(2,3-epoxy-2-methylpropyl)ether.

95. (Previously presented) The method of claim 41, wherein the filler material comprises zirconium tungstate.

96. (Currently amended) The method of claim 46, wherein the coupling agent comprises comprises b-(3,4-epoxycyclohexyl) ethyltrimethoxy silane.

97. (Previously presented) The method of claim 82, wherein the surfactant comprises polyethylene glycol-p-tert-octylphenyl ether.

98. (Previously presented) The method of claim 84, wherein the organic dye comprises nigrosine.

REMARKS

The Examiner states: "The amendment filed May 4, 2006 on pages 5 and 6 lists claim 47 drawn to a non-elected invention as both withdrawn and cancelled. It will be assumed that claim 47 is cancelled." In response, claim 1 is listed herein as canceled and is not listed herein as withdrawn.

The Examiner objected to claims 88 and 94 as being dependent upon cancelled claims 54 and 78, respectively. In response, Applicants have amended claims 88 and 94 to depend from claims 1 and 41, respectively.

The Examiner rejected claims 41, 43, 44, 46, 47, 82, 86, 93 and 95-98 under 35 U.S.C. § 112, second paragraph.

The Examiner rejected claims 1, 14, 18, 41, 43, 46, 59, 61, 62 and 83, 85-87, 90, 93 and 96 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shiobara *et al.* Patent No. 5,225,484.

The Examiner rejected claims 58, 60, 82, 84, 91, 92, 97 and 98 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shiobara *et al.* As applied to the claims hereinabove, and further in view of Christie *et al.* 5,668,059 and Papathomas *et al.* Patent No. 6,790,473.

The Examiner rejected claims 89 and 95 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shiobara *et al.* as applied to the claims hereinabove, and further in view of the Materials Research Society Symposium article by Shi *et al.*

Applicant respectfully traverses the § 112 and § 103 rejections with the following arguments.

35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 41, 43, 44, 46, 47, 82, 86, 93 and 95-98 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner argues: "Independent claim 41 in line 8 defines from about 1.0% by weight to about 5% by weight of a flexiblizing agent, then in lines 6-7 denotes from 2 percent to about 5 percent by weight of the flexibilizing agent. The actual proportion of flexibilizing agent is unclear."

In response, Applicant has amended claim 41 for clarification.

35 U.S.C. § 103(a): Claims 1, 14, 18, 41, 43, 46, 59, 61, 62, 83, 85-87, 90, 93 and 96

The Examiner rejected claims 1, 14, 18, 41, 43, 46, 59, 61, 62, 83, 85-87, 90, 93 and 96 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shiobara *et al.* Patent No. 5,225,484.

Claims 1, 14, 18, 59, 61, 62, 87, and 90

Applicant respectfully contends that claim 1 is not unpatentable over Shiobara, because Shiobara does not teach or suggest each and every feature of claim 1.

As a first example of why claim 1 is not unpatentable over Shiobara, Shiobara does not teach or suggest the feature: “a flexibilizer containing functional groups capable of reaction with the epoxy or cyanate ester resin during thermally induced curing”.

The Examiner argues: “Shiobara ... discloses ... a silicon-based flexibilizer (col. 8, lines 15-30)”.

In response, Applicant contends that Shiobara, col. 8, lines 15-30 does not teach or suggest that the silicon-based flexibilizer contains functional groups capable of reaction with the epoxy or cyanate ester resin during thermally induced curing.

As a second example of why claim 1 is not unpatentable over Shiobara, Shiobara does not teach or suggest the feature: “wherein the composition has a higher fracture toughness, a lower viscosity, and increased thermal shock resistance at a temperature excursion below -40 °C, or combinations thereof than the composition would have if the flexibilizing agent were not present

in the composition”.

The Examiner has not addressed the preceding feature of claim 1.

Based on the preceding arguments, Applicant respectfully maintains that claim 1 is not unpatentable over Shiobara, and that claim 1 is in condition for allowance. Since claims 14, 18, 59, 61, 62, 87 and 90 depend from claim 1, Applicant contends that claims 14, 18, 59, 61, 62, 87 and 90 are likewise in condition for allowance.

In addition with respect to claim 14, Applicant respectfully maintains that Shiobara does not disclose the feature: “wherein the coupling agent comprises about 0.25% by weight of the filler material”.

The Examiner argues: “Shiobara ... discloses ... silane coupling agents (col. 7, lines 50-51 and 57-60) ”.

In response, Applicant Applicant contends that Shiobara, col. 7, lines 50-51 and 57-60 does not disclose that the silane coupling agent comprises about 0.25% by weight of the filler material.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 14.

In addition with respect to claim 18, Applicant respectfully maintains that Shiobara does not disclose the feature: “a substrate having an upper surface; a semiconductor chip mounted on a portion of said upper surface of said substrate and electrically coupled to said substrate, said

semiconductor chip having a bottom surface and at least one edge surface being substantially perpendicular to said bottom surface; and a material positioned on at least said portion of said upper surface of said substrate and against at least a portion of said at least one edge surface of said semiconductor chip, said material being the encapsulant composition of claim 1”.

Applicant contends that Shiobara does not disclose a semiconductor chip, and most certainly does not disclose a semiconductor chip subject to the limitations in the preceding feature of claim 18.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 18.

In addition with respect to claim 18, Applicant respectfully maintains that Shiobara does not disclose the feature: “a substrate having an upper surface; a semiconductor chip mounted on a portion of said upper surface of said substrate and electrically coupled to said substrate, said semiconductor chip having a bottom surface and at least one edge surface being substantially perpendicular to said bottom surface; and a material positioned on at least said portion of said upper surface of said substrate and against at least a portion of said at least one edge surface of said semiconductor chip, said material being the encapsulant composition of claim 1”.

Applicant contends that Shiobara does not disclose a semiconductor chip, and most certainly does not disclose a semiconductor chip subject to the limitations in the preceding feature of claim 18.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 18.

In addition with respect to claim 59, Applicant respectfully maintains that Shiobara does not disclose the feature: “wherein the filler material has a negative coefficient of thermal expansion”.

The Examiner argues: “Shiobara ... discloses ... an inorganic filler such as spherical fused silica (col. 7, lines 50-51 and 57-60)”.

In response, Applicant contends that fused silica has a positive coefficient of thermal expansion, namely $0.48 \times 10^{-6}/K$ to $0.57 \times 10^{-6}/K$ over a temperature range of -100 °C to 200 °C (see http://www.translume.com/m_thermal.htm)

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 59.

In addition with respect to claim 61, Applicant respectfully maintains that Shiobara does not disclose the feature: “wherein the composition further comprises non-reactive organic solvents comprising less than about 0.2% by weight of the composition”.

The Examiner argues: “Shiobara ... discloses ... additives (col. 8, lines 30-37)”.

In response, Applicant contends that Shiobara, col. 8, lines 30-37 does not discloses that the additives are non-reactive organic solvents comprising less than about 0.2% by weight of the composition.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 61.

In addition with respect to claim 62, Applicant respectfully maintains that Shiobara does

not disclose the feature: "wherein the composition is cured and has a coefficient of thermal expansion between about 25 and about 40 ppm/^o C, a glass transition temperature between about 140^o and about 190^o C, and a Shore D hardness greater than about 90".

The Examiner has not addressed the preceding feature of claim 62.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 62.

In addition with respect to claim 87, Applicant respectfully maintains that Shiobara does not disclose the feature: "wherein the epoxy resins comprise 3',4'-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate".

The Examiner has not addressed the preceding feature of claim 87.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 87.

In addition with respect to claim 90, Applicant respectfully maintains that Shiobara does not disclose the feature: "wherein the coupling agent comprises b-(3,4-epoxycyclohexyl) ethyltrimethoxy silane".

The Examiner has not addressed the preceding feature of claim 90.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 90.

Claims 41, 43, 46, 83, 85, 86, 93, and 96

Applicant respectfully contends that claim 41 is not unpatentable over Shiobara, because Shiobara does not teach or suggest each and every feature of claim 41.

As a first example of why claim 41 is not unpatentable over Shiobara, Shiobara does not teach or suggest the feature: “a flexibilizer containing functional groups capable of reaction with the epoxy or cyanate ester resin during thermally induced curing”.

The Examiner argues: “Shiobara ... discloses ... a silicon-based flexibilizer (col. 8, lines 15-30)”.

In response, Applicant contends that Shiobara, col. 8, lines 15-30 does not teach or suggest that the silicon-based flexibilizer contains functional groups capable of reaction with the epoxy or cyanate ester resin during thermally induced curing.

As a second example of why claim 41 is not unpatentable over Shiobara, Shiobara does not teach or suggest the feature: “wherein the composition has a higher fracture toughness, a lower viscosity, and increased thermal shock resistance at a temperature excursion below -40 °C, or combinations thereof than the composition would have if the flexibilizing agent were not present in the composition”. The Examiner has not addressed the preceding feature of claim 1.

As a third example of why claim 41 is not unpatentable over Shiobara, Shiobara does not teach or suggest the feature: “wherein immediately after the steps of adding the flexibilizing

agent and adding the filler material have been performed the composition is uncured and the composition is stable for a time period at least 12 hours". The Examiner has not addressed the preceding feature of claim 41.

Based on the preceding arguments, Applicant respectfully maintains that claim 41 is not unpatentable over Shiobara, and that claim 41 is in condition for allowance. Since claims 43, 46, 83, 85, 86, 93 and 96 depend from claim 41, Applicant contends that claims 43, 46, 83, 85, 86, 93 and 96 are likewise in condition for allowance.

In addition with respect to claim 43, Applicant respectfully maintains that Shiobara does not disclose the feature: " blending said resin material, ... wherein said step of blending is performed under vacuum".

The Examiner has not addressed the preceding featurre of claim 43.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 43.

In addition with respect to claim 46, Applicant respectfully maintains that Shiobara does not disclose the feature: "wherein the coupling agent comprises about 0.25% by weight of the filler material".

The Examiner argues: "Shiobara ... discloses ... silane coupling agents (col. 7, lines 50-51 and 57-60) ".

In response, Applicant Applicant contends that Shiobara, col. 7, lines 50-51 and 57-60

does not disclose that the silane coupling agent comprises about 0.25% by weight of the filler material.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 46.

In addition with respect to claim 83, Applicant respectfully maintains that Shiobara does not disclose the feature: “wherein the filler material has a negative coefficient of thermal expansion”.

The Examiner argues: “Shiobara ... discloses ... an inorganic filler such as spherical fused silica (col. 7, lines 50-51 and 57-60)”.

In response, Applicant contends that fused silica has a positive coefficient of thermal expansion, namely $0.48 \times 10^{-6}/\text{K}$ to $0.57 \times 10^{-6}/\text{K}$ over a temperature range of -100 °C to 200 °C (see http://www.translume.com/m_thermal.htm)

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 83.

In addition with respect to claim 85, Applicant respectfully maintains that Shiobara does not disclose the feature: “wherein the composition further comprises non-reactive organic solvents comprising less than about 0.2% by weight of the composition”.

The Examiner argues: “Shiobara ... discloses ... additives (col. 8, lines 30-37)”.

In response, Applicant contends that Shiobara, col. 8, lines 30-37 does not discloses that the additives are non-reactive organic solvents comprising less than about 0.2% by weight of the

composition.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 85.

In addition with respect to claim 93, Applicant respectfully maintains that Shiobara does not disclose the feature: “wherein the epoxy resins comprise 3',4'-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate”.

The Examiner has not addressed the preceding feature of claim 93.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 93.

In addition with respect to claim 96, Applicant respectfully maintains that Shiobara does not disclose the feature: “wherein the coupling agent comprises b-(3,4-epoxycyclohexyl) ethyltrimethoxy silane”.

The Examiner has not addressed the preceding feature of claim 96.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 96.

35 U.S.C. § 103(a): Claims 58, 60, 82, 84, 91, 92, 97 and 98

The Examiner rejected claims 58, 60, 82, 84, 91, 92, 97 and 98 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shiobara *et al.* As applied to the claims hereinabove, and further in view of Christie *et al.* 5,668,059 and Papathomas *et al.* Patent No. 6,790,473.

As a preliminary matter, applicant maintains that Papathomas cannot be used as a prior art reference under 35 U.S.C. §103(a) against claims of the present patent application, as explained *infra*.

Claims 58, 60, 91, and 92

Since claims 58, 60, 91, 92 depend from claim 1, which Applicants have argued *supra* to not be unpatentable over Shiobara under 35 U.S.C. §103(a), Applicants maintain that claims 58, 60, 91, and 92 are likewise not unpatentable over Shiobara in view of Christie and Papathomas under 35 U.S.C. §103(a).

Claims 82, 84, 97 and 98

Since claims 82, 84, 97 and 98 depend from claim 41, which Applicants have argued *supra* to not be unpatentable over Shiobara under 35 U.S.C. §103(a), Applicants maintain that claims 82, 84, 97 and 98 are likewise not unpatentable over Shiobara in view of Christie and Papathomas under 35 U.S.C. §103(a).

Papathomas Cannot be Used as a Prior Art Reference

Applicants respectfully contend that Papathomas (USP 6,790,473) cannot be used as prior art in rejecting claims of the present patent application, because “[e]ffective November 29, 1999, subject matter which was prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e) is now disqualified as prior art against the claimed invention if that subject matter and the claimed invention ‘were, at the time the invention was made, owned by the same person or subject to assignment by the same person.’” MPEP 706.02(1)(1). First, the present patent was filed on February 7, 2001 which is after November 29, 1999. Second, the Papathomas patent is being considered by the Examiner as prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e), because the the Papathomas patent was published on September 14, 2004 which is after the filing date of February 7, 2001 of the present patent application. Third, both the subject matter of Papathomas patent and the claimed invention of the present patent application were, at the time the invention was made, owned by International Business Machines Corporation or subject to assignment by International Business Machines Corporation. Accordingly, Applicant respectfully maintains that Papathomas cannot be used as a prior art reference under 35 U.S.C. 103(a) against claims of the present patent application.

35 U.S.C. § 103(a): Claims 89 and 95

The Examiner rejected claims 89 and 95 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shiobara *et al.* as applied to the claims hereinabove, and further in view of the Materials Research Society Symposium article by Shi *et al.*

Claim 89

Since claim 89 depends from claim 1, which Applicants have argued *supra* to not be unpatentable over Shiobara under 35 U.S.C. §103(a), Applicants maintain that claim 89 is likewise not unpatentable over Shiobara in view of Shi under 35 U.S.C. §103(a).

In addition with respect to claim 89, Applicant respectfully maintains that Shiobara does not disclose the feature: “wherein the filler material comprises zirconium tungstate”.

The Examiner argues: “Shiobara et al. does not recite the claimed zirconium tungstate as the filler. Shi et al. teaches the use of zirconium tungstate as a filler in an epoxy resin composite for electronic applications. It would have been obvious to employ the' zirconium tungstate of Shi et al. as the inorganic filler of Shiobara et al. in order to impart a negative coefficient of thermal expansion to the encapsulants.”

In response, Applicant contends that the Examiner’s argument for modifying Shiobara by the alleged teaching of Shi is not persuasive, because the Examiner has not supplied any prior art that allegedly discloses motivation for the filler material in Shiobara’s composition to impart a negative coefficient of thermal expansion to the encapsulants.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 89.

Claim 95

Since claim 95 depends from claim 41, which Applicants have argued *supra* to not be unpatentable over Shiobara under 35 U.S.C. §103(a), Applicants maintain that claim 95 is likewise not unpatentable over Shiobara in view of Shi under 35 U.S.C. §103(a).

In addition with respect to claim 89, Applicant respectfully maintains that Shiobara does not disclose the feature: “wherein the filler material comprises zirconium tungstate”.

The Examiner argues: “Shiobara et al. does not recite the claimed zirconium tungstate as the filler. Shi et al. teaches the use of zirconium tungstate as a filler in an epoxy resin composite for electronic applications. It would have been obvious to employ the zirconium tungstate of Shi et al. as the inorganic filler of Shiobara et al. in order to impart a negative coefficient of thermal expansion to the encapsulants.”

In response, Applicant contends that the Examiner’s argument for modifying Shiobara by the alleged teaching of Shi is not persuasive, because the Examiner has not supplied any prior art that allegedly discloses motivation for the filler material in Shiobara’s composition to impart a negative coefficient of thermal expansion to the encapsulants.

Accordingly, the Examiner has not established a *prima facie* case of obviousness in relation to claim 95.